

Teledesic

May 7, 1996

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The Honorable Reed E. Hundt
Chairman
Federal Communications Commission
Federal-State Joint Board on Universal Service
1919 M Street, N.W.
Washington, DC 20010

MAY 7 '96

RECEIVED

Re: In the Matter of Federal-State Joint Board on Universal Service,
CC Docket No. 96-45

Dear Mr. Chairman:

With this letter, Teledesic Corporation submits its views on universal service to the Federal Communications Commission (FCC or Commission) and the Federal-State Joint Board on Universal Service (Joint Board) in the Commission's proceeding referenced above.^{1/} Teledesic urges the Commission and Joint Board, as they strive to resolve the most immediate issues placed before them by Congress in the *Telecommunications Act of 1996*,^{2/} to fashion an approach to universal service that recognizes long-term and fundamental changes in the telecommunications industry and society in general. The universal service principle that underlies U.S. telecommunications policy is one of the great success stories of modern government. More than 94 percent of U.S. households have access to basic voice service -- one of the highest percentages in the world and extraordinary for a territory as vast and diverse as the United States. But as access to more advanced information services becomes increasingly essential to economic development and social welfare, there is a danger that the gap will increase between those who have affordable access to such services and those who do not.

Central to the universal service debate is how to reconcile the twin objectives of expanding the scope of universal service, while placing greater reliance on competitive market forces. Today's deregulatory and competitive environment creates a fundamental

^{1/} See *In the Matter of Federal-State Joint Board on Universal Service*, Notice of Proposed Rulemaking and Order Establishing Joint Board, CC Docket No. 96-45 (rel. Mar. 8, 1996) (*Notice*).

tension as it erodes the cross subsidies that are at the center of the U.S. universal service regulatory structure. In such an environment, it is clear that recognizing a wireless view as well as a wireline view of the telecommunications world is critical to ensuring universal service and access to advanced telecommunications services. In the wired world the cost of service, and thus the subsidies required to mitigate high costs in certain areas, is often dictated by distance. However, for wireless technology in general and satellites in particular, distance is irrelevant.

In the wireline model, a residential access line costs the same amount for any given distance as a trunk line. However, a residential line might be in use, on average, 15 minutes per day -- 1 percent of the time -- while a network trunk line might be in use 50 percent of the time. Obviously, the residential line is economically underutilized in comparison to the trunk line. Moreover, wireline access costs increase as proximity to the local exchange and subscriber density decrease. The cost of access for a distant rural subscriber can run 10 to 20 times (some estimates run as high as 30 times) than that for some urban subscribers. Because the costs of wireline access are not uniform, universal access has required heavy cross subsidies from low-cost/high-revenue subscribers to high-cost/low-revenue subscribers.

As the FCC states in its *Notice* and Congress acknowledges in the 1996 Act, the trend toward deregulation in telecommunications, if it is to continue, will erode these cross subsidies. Yet, again as the Commission's *Notice* and the 1996 Act make clear, the principle of universal access remains fast. Moreover, there are strong indications that it may eventually be expanded to include at least some form of broadband service. Indeed, the 1996 Act requires that the Joint Board's and Commission's policies for the preservation and advancement of universal service be based, in part on the principle of access to advanced services.^{3/}

In particular, the 1996 Act includes the general principle that "[a]ccess to advanced telecommunications information services should be provided in all regions of the Nation"^{4/} and requires the Commission to review periodically the definition of universal service "taking into account advances in telecommunications and information technologies and services."^{5/} The 1996 Act further requires that "[e]lementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services. . . ."^{6/} While Congress did not specify what services would constitute universal service for education, libraries and healthcare, it does authorize the Commission to define

^{3/} 1996 Act § 254(b).

^{4/} 1996 Act § 254(b)(2).

^{5/} 1996 Act § 254(c)(1).

^{6/} 1996 Act at § 254(b)(6).

universal service differently for this group of public institutional telecommunications users, thus opening the door for an expanded definition of universal service generally.^{2/}

The wireline model of providing universal access to advanced telecommunications is certainly not the only model, and is probably not the best model for reaching underserved populations at reasonable costs. Much of the apparent conflict between deregulation and universal service is ameliorated by the economics of wireless access. The cost of wireless access, for the most part, is unrelated to distance from the local exchange and to subscriber density. Moreover, because access costs are not exclusively dedicated to particular end-users, utilization rates can be optimized over many subscribers. Wireless access can be provided to remote, rural subscribers without heavy cross subsidies. This, in turn, can clear the way for an expansion of market forces in the telecommunications industry.

As a nation, we often focus on the vast regions of the developing world that are completely without telephone service. However, even in this country, despite the universal service principle, rural service may not be adequate for the 21st Century. While under the existing subsidy structure, many rural telephone companies were able to upgrade the local exchange, in a competitive environment, the continuing cost to upgrade conventional wireline facilities to handle more advanced information services is prohibitive in many rural areas with their small, but widely dispersed customer bases. Wireless access, including satellite service, provides a means of extending the principle of universal service to these areas in the absence of cross subsidies. Wireless access is critical if, as the 1996 Act dictates, this principle must include access to advanced telecommunications.

Whether universal service is a legal mandate, a political imperative or simply a social aspiration, its scope and importance will increase with increasing demand for bandwidth. For areas of moderate or low user density, the economics of wireline access are increasingly irrelevant. As a practical matter, for most of these areas, if they are not wired now they probably never will be. As broadband applications proliferate, this unmet demand for bandwidth will increase. This gap between the information "haves" and "have nots" will be increasingly unacceptable politically, socially and economically. It must be bridged if the telecommunications industry is to be freed from a regulatory structure based on the economics of copper wireline access. The challenge, and the opportunity, in this changing world is no longer how to provide basic telephony but how to provide access to real-time broadband services to areas of moderate or low user density.

Wireless systems, including satellites, cellular or PCS, or combinations thereof, can provide a way to extend the principle of universal service to underserved areas at low cost. For example, systems such as Teledesic's non-geostationary (NGSO) satellite system, will be able to provide capacity to all parts of the United States. NGSO satellite systems are a fundamentally egalitarian technology that promise to radically transform the economics of

^{2/} Notice at ¶ 11.

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telecommunications infrastructure. Because NGSO systems are inherently global, they will provide service to all areas of the United States, including those places to which no one would extend service for its own sake. The "externalities" of these systems offer the potential for vast benefit to those parts of the United States most at risk of being left behind by the information revolution.

The apparent conflict between deregulation and universal service underlies the challenge we have set for ourselves at Teledesic. Unlike other NGSOs that will provide narrowband data and voice services, Teledesic will provide "fiber-like" interconnection to rural and remote areas and thus has the potential to bring the promise of a variety of services, such as education and training, health services or emergency management, that are essential to future economic progress for all regions of America.

We urge the Joint Board and the Commission to adopt policies to encourage innovative solutions, such as broadband NGSO systems, to providing universal access to advanced telecommunications services. The third universal service principle of the 1996 Act requires that the Commission ensure that "[c]onsumers in all regions of the Nation. . . have access to telecommunications and information services. . . that are reasonably comparable to those services provided in urban areas.^{8/} Broadband NGSO satellite systems such as Teledesic's system can, and will as a matter of design, provide true universal access to advanced telecommunications services.

The 1996 Act has given the Commission and the Joint Board an opportunity to think creatively about solutions to universal access to advanced telecommunications services. Satellite communications systems have the potential to alter the industrial and economic paradigm positively and dramatically. The actions of the Commission and the Joint Board should encourage this change and incorporate it into its vision of the future of universal service.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W. Russell Daggatt', with a long horizontal line extending to the right.

W. Russell Daggatt

cc: Commissioner James Quello
Commissioner Rachelle Chong
Commissioner Susan Ness

^{8/} See 1996 Act § 254(b)(3).

CERTIFICATE OF SERVICE

I, Kay Hawkins, hereby certify that on the 7th day of May, 1996, a true copy of the foregoing Views on Universal Service, CC Docket No. 96-45 has been sent by U.S. mail, postage pre-paid, to the following:

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